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THE LESSON OF THE OWL AND THE CROWS: THE ROLE OF DECEPTION IN THE EVOLUTION OF THE ENVIRONMENTAL STATUTES

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I. GAME THEORY AND THE ADVANTAGES OF THE GOOD FAKE

In recent times, a number of writers have devoted attention to the application of game theory to legal phenomena.[1] Unlike much formal decision analysis, the game theory "best" choice is strikingly conditional and dependent upon the strategies of the other players.[2] The point is made convincingly by the predicament of the red squirrel:[3] the squirrel developed chattering as a strategy to discourage predators like the great horned owl; it was a good strategy for the moment because an alert prey is of no interest to the owl. But chattering is not a good strategy for all times and occasions; with the appearance of a new predator—humans armed with rifles—chattering is a decidedly poor strategy.

In this world of strategies and counterstrategies, the advantages of the good fake are not to be overlooked. Fakery is an indelible part of the landscape in settings where we readily accept the gaming metaphor—sporting events are the obvious examples. But I wish to emphasize how fakery and deception can play an important role in legal interactions as well, particularly in the writing of the environmental statutes.

Environmental lawyers often are fond of borrowing examples from natural history to illustrate propositions of law. There is more to this

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1. *See, e.g.*, Rodgers, *The Evolution of Cooperation in Natural Resources Law: The Drifter/Habitué Distinction*, 38 U. FLA. L. REV. 195 (1986) [hereinafter *1986 Drifter/Habitué*]; W.H. RODGERS, ENVIRONMENTAL LAW: AIR AND WATER, 2 vols. (1986) [hereinafter AIR AND WATER]; Elliot, Ackerman & Millian, *Toward a Theory of Statutory Evolution: The Federalization of Environmental Law*, 1 J.L. ECON. & ORG. 313 (1985).

2. *1986 Drifter/Habitu§*, *supra* note 1, at 197.

3. Rodgers, *The Lesson of the Red Squirrel: Consensus and Betrayal in the Environmental Statutes*, 5 J. CONTEMP. HEALTH L. & POL'Y ____ (1988) [hereinafter *1988 Red Squirrel*].

practice than habit, it seems to me, because the natural laws of evolution contain lessons in the results of competitive struggle that fit closely the experiences of legal gameplaying.

Nature, it turns out, offers a treasure trove of fakes, feints, and deceptions, described in the literature usually under the heading of mimicry.[4] Individual members of species succeed not only by hiding, but by misrepresentation if they are discovered by predators. One can find examples of sheep in wolves' clothing: delicious insects that look like poisonous ones and flies that succeed in droning on the same frequency as stinging bees. Some wolves are dressed in sheeps' clothing: one tropical hawk drifts about like a vulture and enjoys great hunting success because the victims mistakenly believe they are in the presence of a bird who prefers carrion. Nature offers this widespread resort to deceptive props: some moths have evolved eyespot patterns on their wings that are thought to startle predators, and thus offer the intended victims momentary opportunities for escape.

And nature gives examples of deliberately deceptive behavior: the title of my lecture is drawn from a tale[5] of an owl and some crows who were reared in close proximity to one another. In order to discourage a steady and dangerous diet of silent swoops, any one of which could be fatal, the crows developed a strategy of wandering into easy range, "pretending" to be wholly unaware of the presence of the owl, only to sidestep the futile strikes with disdain and ease. By this stratagem, the crows "proved" to the satisfaction of the owl that crows could not be seized, under even the best of circumstances, and the unwanted attacks ceased altogether.

II. Faking and Deception in the Development of the Environmental Statutes

In another paper,[6] I've developed the notion that the process of enactment of the environmental statutes is a gameplaying phenomenon that is likely to yield legislation with both "consensus" and "betrayal" features. It is important to underscore the significance of deception, both in building the "consensus" necessary for enactment, and in accomplishing the "betrayal" often observed in the waning hours of enactment.

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4. *E.g.*, Lewin, *Do Animals Read Minds, Tell Lies?*, 238 Science 1350 (1987); Letter of M.E. Bitterman, *Creative Deception*, 239 Science 1360 (1988) (noting that the capacity to communicate includes the ability to deceive); P. Evans, Ourselves and Other Animals 105-124 (1987).

5. B. Heinrich, One Man's Owl 140-150 (1987).

6. *1988 Red Squirrel*, *supra* note 3.

A. Fakery: The Material of Consensus

1. Process Entitlements, Hedges, and Bets

It is no secret that process can consume substance,[7] and the environmental laws offer many examples.[8] Process is an excellent hiding place for lawmakers who wish to remain uncommitted to particular substantive outcomes. Students of the subject often are astounded by the profound indirection that grips the field of environmental law. Only occasionally does the law ask whether a particular course of conduct is compatible with environmental values. The question is more likely to be posed in process terms—expressed most prominently in the impact statement requirements.

2. Ambiguity and Delegation

Delegation of authority is another famous preference-hider that makes a regular appearance in the environmental statutes. To mention but one prominent example, the term "unreasonable risk" appears thirty-five times in the thirty-three pages of the Toxic Substances Control Act.[9] There is great comfort for legislators who wish to hide in this thicket immune from the sharp scrutiny of predatory constituents.

3. Dissembling and Manipulation

Dissembling and manipulation are other devices found regularly in environmental statutes that allow legislators to remain noncommittal. "Dissembling should be taken to mean hoping to achieve A by voting for B and manipulation should be taken to mean a packing of the agenda to make dissembling possible."[10] The phenomenon is described convincingly by Judge Abner Mikva who gives this account of the "careful[] nurturing" of a "difficult coalition" that included miners, mine owners and environmentalists by Representative Morris ("Mo") Udall as he guided some strip mining legislation through the Congress:

> He [Udall] was the floor manager and a lot of us were sitting in the cloakroom when one of the Members from West Virginia, a mining

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7. *See* Hazard, *The Effect of the Class Action Device upon the Substantive Law*, 58 F.R.D. 307 (1973). "Substantive law is shaped and articulated by procedural possibilities." *Id.* at 307.

8. *See, e.g.*, 2 AIR AND WATER, *supra* note 1, § 4.33(A), at 476-82 (toxic pollution regulations).

9. 15 U.S.C. §§ 2601-2629 (1982).

10. *1988 Red Squirrel*, *supra* note 3, at ____.

> state, got up and said, 'Now will the gentleman from Arizona assure me that this bill protects state sovereignty and makes clear that the states continue to have an active and important role in how the strip mines are to be regulated.' Udall said, 'The gentleman from West Virginia is absolutely correct. The bill protects states' rights and state sovereignty and makes sure that the states continue to play an important role.' A little later on in the debate one of the environmentalist Congressmen got up and said, 'Now will the gentleman from Arizona assure me that this once and for all sets federal standards and makes it clear that there is a federal law that decides what kind of strip mining will be allowed?' And Udall said, 'The gentleman is absolutely correct. The law once and for all will put the federal authorities in control.' He then came into the cloakroom for a drink of water and we laughed and said, 'Mo, they both can't be right.' He said, 'The gentleman is absolutely correct.' The bill passed. Is it any wonder that the bill is not as clear and precise and specific as some of us might have wanted?[11]

4. Postponements

Postponements, or "more study" provisions, are another useful prop for lawmakers who won't or can't decide. There are all kinds of reasons for putting off a decision until tomorrow, both benign and otherwise, so it is relatively easy for a lawmaker to justify a "more study" vote on principled grounds.

5. Self-Nullifications

Self-nullifications are legislative stand-offs "where command and countermand are stuffed into the same sorry package."[12] A good example is the whistleblower protection provisions that are found in some of the environmental statutes.[13] These provisions offer workers who give evidence of polluting behavior protection from employer retaliation, but the thirty-day statute of limitations[14] withdraws a meaningful remedy in all but the unusual case. Nobody wins under this kind of legislation, of course, but nobody loses either, and that is why self-nullification in legislation is not at all uncommon.

6. Teases or Aspirational Commands

Teases or aspirational commands are additional techniques that allow lawmakers to be simultaneously "for" and "against" identifiable

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11. Mikva, *Reading and Writing Statutes*, 48 U. PITT. L. REV. 627, 636-37 (1987).
12. *1988 Red Squirrel, supra* note 3, at ____.
13. *See, e.g.*, Toxic Substances Control Act, 15 U.S.C. § 2622 (1982).
14. *Id.* § 2622(b)(1).

outcomes. Like the delegation tactic, commitment to a vague goal does not tie a lawmaker to any particular means of implementation.[15] This is a dream political world without unsavory options and irascible victims. The hard choices must await initiatives by somebody else.

B. *Fakery: The Material of Betrayal*

1. *Defections*

Defection is a term I've used to describe various end-of-the-game stratagems used to seize advantages at the expense of the unprepared and ill-equipped. An example is the legislative decision that allowed the Tellico Dam to go forward in the face of powerful environmental and economic objections:

> [T]he pork-barrel proponents, in forty-two seconds, in an empty House chamber, were able to slip a rider onto an appropriations bill, repealing all protective laws as they applied to Tellico and ordering the reservoir's completion. Despite a half-hearted veto threat by President Carter and a last-minute constitutionally-based lawsuit brought by the Cherokee Indians, the TVA [Tennessee Valley Authority] was ultimately able to finish the dam, close the gates, and flood the valley on November 28, 1979.[16]

2. *Sleepers*

Sleepers, by definition, are legislative provisions with practical consequences far outstripping those anticipated by the formal legislative vision. It goes without saying that gameplayers who create or detect beneficial sleepers do not advertise the fact, since the strategy is to go for sizeable gains without paying any price in return. Obviously, pursuit of the sleeper strategy means that a law will look a great deal differently the day after enactment than it does the day before.

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15. *See* Schoenbrod, *Goals Statutes or Rules Statutes: The Case of the Clean Air Act*, 30 UCLA L. REV. 740 (1983).

16. Plater, *In the Wake of the Snail Darter: An Environmental Law Paradigm and Its Consequences*, 19 U. MICH. J.L. REF. 805, 813-14 (1986) (footnotes omitted). *See id.* at 813-14 n.32 (pointing out how the legislative "maneuver" violated the rules of the House of Representatives and how the move was engineered "so that none of the few representatives present would understand what was being done").

III. THE CONSEQUENCES OF FAKERY OVER TIME: AN EVOLUTIONARY VIEW OF STATUTORY INSTRUCTIONS

A. Instability of the Legislative Product

Can we say anything useful about the fate of these environmental statutes that include a precarious mix of consensus and betrayal traits? First, let us define a statute as an act of the legislature that instructs persons and organizations to act in certain ways. The typical statute contains many instructions or norms within the legislative package, and these are subject to differing interpretations. This universe of plausible interpretations is taken to represent the population for purposes of analysis. Students of evolution emphasize that close attention must be paid to the sources of change within the population under study and to the selection mechanisms that yield differential survival rates.[17]

What are the mechanisms that can introduce change or variation into the set of instructions set loose as a statute? Preliminarily, it is intuitively plausible that future gameplayers will take a strongly instrumental view of statutory instructions. These instructions will be treated as part of the background environment available for self-maintenance against the mischief of the world. The statute suddenly means what lawyers and others say it means, as it undergoes translation in the world at large. Put somewhat differently, statutory instructions immediately will be put to use as interpretations in legal gameplaying in a host of different arenas.

After enactment, self-imposed constraints on the players are suddenly loosened. Players are free to urge interpretations heretofore undisclosed, or indeed unimagined. Sleepers, skewers,[18] and defections are now in the open claiming unsuspecting victims. This frenzy of in-

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17. *E.g.*, N. ELDRIDGE, TIME FRAMES: THE RETHINKING OF DARWINIAN EVOLUTION AND THE THEORY OF PUNCTUATED EQUILIBRIA (1985); E. MAYR, THE GROWTH OF BIOLOGICAL THOUGHT: DIVERSITY, EVOLUTION, AND INHERITANCE (1982). *See also* J.T. BONNER, THE EVOLUTION OF CULTURE IN ANIMALS (1980); D.R. HOFSTADTER, METAMAGICAL THEMAS: QUESTING FOR THE ESSENCE OF MIND AND PATTERN 119 (1985) (conflicting interpretations of a statute from which some selection must be made?); H. KAUFMAN, TIME, CHANCE, AND ORGANIZATIONS: NATURAL SELECTION IN A PERILOUS ENVIRONMENT (1985); Chibnik, *The Evolution of Cultural Rules*, 37 J. ANTHROPOLOGICAL RES. 256 (1981); Clark, *The Morphogenesis of Subchapter C: An Essay in Statutory Evolution and Reform*, 87 YALE L.J. 90 (1977); Diener, *Quantum Adjustment, Macroevolution, and the Social Field: Some Comments on Evolution and Culture*, 21 CURRENT ANTHROPOLOGY 423 (1980).

18. Skewers shift liabilities to nonparticipants. One example in environmental laws would be the shifting of liabilities to the taxpayer, such as indemnification for owners of banned pesticides. *1988 Red Squirrel*, *supra* note 3, at ____.

terpretation in the wake of enactment produces a long list of surprising readings and tactics. These include betrayals of sidebar agreements not recorded in the legislation, the invention of legislative history after-the-fact, and the attribution of meanings scorned by the negotiating principals.[19] Legislative insiders routinely are offended by the extraordinary directions "their" legislation takes at the hands of outsiders, amateurs and skewees.

This strong centrifugal tendency toward different interpretations is reinforced by catalysts and accelerators that are part of the initial consensus product. The opportunistic decision-avoidance techniques necessary to secure a nonzero sum law[20] feed these later changes; the postponements, such as the study or commission provisions, yield an empirical harvest that can be used to modify tentative legislative conclusions. Delegations are famous for returning to haunt those who took the easy way out. Other process deferrals rebound in similar fashion as experience proves them unworkable in fact.[21] Variances and exemptions necessary for enactment look like ugly "gaps" from the fuller vantage point offered by time. Teases and half-laws are built-in invitations to complete the story.[22] The victims of eleventh-hour defections are spoiling to settle the score, and may have good reason to believe they were done in by a bogus or unrepresentative law.[23]

B. Courts as Selection Mechanisms

In this blizzard of different meanings, it is hardly surprising that some interpretations stick and some don't. The institutions that do the selecting are no mystery,[24] and the criteria for selection are the subject of unceasing argument. Our attention will be confined to the courts that have the prerogative to select and anoint as authoritative only the chosen interpretations.

Courts change statutes because they reject some interpretations as implausible and unjustified. Judicial readings can work in tandem

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19. An illustration appears in Lombardo v. Handler, 397 F. Supp. 792 (D.D.C. 1975), *aff'd*, 546 F.2d 1043 (D.C. Cir. 1976), *cert. denied*, 431 U.S. 932 (1977).

20. 1 AIR AND WATER, *supra* note 1, at vii.

21. The toxic pollutant provisions of the Clean Water Act are illustrative. Federal Water Pollution Control Act (Clean Water Act), 33 U.S.C. §§ 1251-1376 (1982). *See also* 2 AIR AND WATER, *supra* note 1, § 4.33, at 475-90; C.S. SMITH, A SEARCH FOR STRUCTURE: SELECTED ESSAYS ON SCIENCE, ART, AND HISTORY 62, fig. 3.13 (1981) (refinement, partitioning, and elaboration of statutory instructions over time?).

22. The "protect and enhance" language in the statement of purposes of the Clean Air Act, 42 U.S.C. § 7401(b)(1) (1982), has grown into a huge no-significant-deterioration program. 1 AIR AND WATER, *supra* note 1, §§ 3.21-.23, at 351-82.

23. *See supra* text accompanying note 16.

24. These, of course, are legislatures, courts, agencies and private organizations.

with other influences to encourage legislative amendments. The environmental statutes are amended regularly, often with an expressed design to embrace[25] or overrule[26] provocative judicial decisions. A few of the ways in which courts can accelerate this process of legislative reconsideration include the following:

* construing vague and ambiguous terms that were used as refuges for choice avoidance;[27]
* disregarding contrived legislative history;[28]
* recognizing and enforcing "sleepers" that may change costs and benefits as calculated by the legislature;[29]
* disregarding the cross-cancellation purposes hidden in statutory "teases," which is another way of creating a constituency aggrieved by the turn of events.[30]

It goes without saying that identification of the "correct" posture of the courts in reviewing statutory hybrids, those that are partly consensus and partly betrayal, is no easy task.[31] Game theory counsels that undeviating strategies are doomed to failure. This was the problem of the red squirrel, and it was the problem that was overcome by the crows. One possibility is that the "best" strategy for the courts is neither deference, nor a lack thereof to the legislative product, but rather a combination of the two that can resist exploitation by the legislative branch.

IV. Evolution and Direction: Rise, Fall, or Drift?

History is littered with the reputations of scholars who have struggled to discover normative advice in evolutionary behavior.[32] But the

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25. *See* 1 Air and Water, *supra* note 1, at v-ix.

26. *See* W.H. Rodgers, Environmental Law: Pesticides and Toxic Substances 514 n.38 (1988). The Hazardous and Solid Waste Amendments of 1984, 42 U.S.C. §§ 6901-6987, explicitly disapprove several court decisions.

27. A commendable practice that is disapproved in Diver, *Statutory Interpretation in the Administrative State*, 133 U. Pa. L. Rev. 549 (1985).

28. Compare United States v. Ilco, Inc., No. CV85-H-823-S (N.D. Ala. July 14, 1987) (LEXIS, Genfed library, Dist file) (disregarding affidavits of two members of Congress stating what was on their minds at the time of enactment in 1980) with Mikva, *supra* note 11 (discussing the tendencies of legislators to develop contrived legislative history).

29. 2 Air and Water, *supra* note 1, § 4.11, at 162-80.

30. *See supra* note 22.

31. *1988 Red Squirrel*, *supra* note 3, at ____ (pointing out how the normal assumptions of statutory interpretation disavow the deceptions that are manifest in the process and product).

32. *E.g.*, J. Huxley, Evolution in Action (1953); P. Kitcher, Vaulting Ambition: Sociobiology and the Quest for Human Nature (1985); R. Nisbet, History of the Idea of Progress (1980); G.G. Simpson, The Meaning of Evolution (1967); R.J. Richards, Darwin and the Emergence of Evolutionary Theories of Mind and Behavior (1987).

question is unceasingly seductive: do statutes improve over time,[33] decline, or wander about pulled to-and-fro by the warring factions? This question does not get much easier if an attempt is made to reformulate it in descriptive terms, such as: does the legal presence of statutes, for example, their authoritativeness or influence, grow, decline, or remain static when measured over time?

A. Problems of Definition and Sampling

It is no easy trick to characterize the viability or authority of any set of legislative instructions. One can envisage any number of indicators that might serve as a rough measure of resolving power or authoritativeness of a legislative directive.[34] Measuring change over time of this elusive "authoritativeness" is a more difficult challenge yet. Impossibility theorems are likely to stand in the way of attempts to evaluate a set of statutory instructions and to say something useful about their future prospects.[35] Even so simple a matter as statutory extinction, marked by a repeal, may be indecisive if the observer chooses to pay attention to the genetic heritage of the new legislative species.[36]

Even apart from the standard of statutory "authority," there is the further complication of the short-run sample affording a misleading indicator of trends.[37] In all likelihood, empirical substantiation is available for the more popular models: gradual decline,[38] dormancy and explosive growth, cyclical growth and decline, rapid growth and gradual decline. This is not surprising since the phenomenon under investigation, evolution of populations over time, is dramatically conditional: extravagant success and abject failure alike are subject to sudden reversal when the environment changes. The red squirrel hy-

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33. A poll of all of those who select one interpretation over another is likely to disclose unanimity for the proposition that the selected reading makes the statute "better" (e.g., more welfare enhancing). What is the collective outcome of these countless individual "bests"?

34. Indicators might include the number of pages, citations in lawyers' documents, recognition in the relevant culture, and probability estimates of compliance.

35. *See* L.B. SLOBODKIN, GROWTH AND REGULATION OF ANIMAL POPULATIONS (2d ed. 1980). "There does not exist any measurement or set of measurements of a population itself which will serve as a measure of its probability of survival." *Id.* at 206.

36. To mention but one example, The Insecticide Act of 1910, ch. 191, §§ 1-14, 36 Stat. 331, was repealed in 1947, but its historic statutory instructions linger on in today's Federal Insecticide, Fungicide, and Rodentcide Act, 7 U.S.C. § 136 (1982). The search for common ancestry is a delightful exercise long engaged in by paleoanthropologists, among others. It has been aided by the spectacular advances in the techniques of molecular biology.

37. *See, e.g.*, V. BRAITENBERG, VEHICLES: EXPERIMENTS IN SYNTHETIC PSYCHOLOGY 19, fig. 8 (1984) (short-run behavior of a statute?).

38. *See, e.g.*, E.R. TUFTE, THE VISUAL DISPLAY OF QUANTITATIVE INFORMATION 41 (1983) (gradual decline of a statute over time?).

pothesis advises that every successful strategy is uniquely dependent upon what the other players are doing.[39]

B. *The Prospects of Devolution*

Finessing these several difficulties, do we nonetheless have reasons for believing that the prominent fate of a statute is decline? After all, information theory is intimately linked to the entropy laws,[40] and legal researchers are constantly stumbling across the bones of desuetudenal laws. Unfortunately, any general thesis of decline also must account for spectacular episodes of growth. Historians of environmental law could substantiate the claim that dramatic "advances" in the field have been occasioned by the opportunistic application of old and outdated laws.[41]

Three lines of argument hold promise for substantiating a thesis of general decline. First is the intuitively appealing notion that any legislative "snapshot in time," however cleverly contrived, will be isolated and gradually overwhelmed by changes of fact and value. Working against this vision of statutory entropy are various rehabilitation mechanisms to keep the laws current or responsive. Judicial interpretation is an obvious possibility,[42] although one suspects there is a penalty associated with the best judicial revisions of old statutes.[43] Despite this sense of a "Second Law"[44] at work, for example, that statutes will run down faster than they can be fixed, one really can't be sure. The legislation perceived as a "snapshot in time" also evolves with the times. Thus, the outcome of any contest between the tenden-

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39. *1988 Red Squirrel*, *supra* note 3. Robert Axelrod shows us that tit-for-tat is a robust and successful strategy in a wide variety of environments. R. AXELROD, THE EVOLUTION OF COOPERATION, *passim* (1984). *See also* P. ANTHONY, GOLEM IN THE GEARS 254-279 (1986). Tit-for-tat is a failing strategy, however, in a world of defectors.

40. *See* J. CAMPBELL, GRAMMATICAL MAN: INFORMATION, ENTROPY, LANGUAGE, AND LIFE (1982). It was, I believe, Alfred North Whitehead who said: "Information keeps no better than fish."

41. Nominees include issues of water pollution (Refuse Act of 1899, 33 U.S.C. § 407 (1982) and Bonneville Project Act of 1937, 16 U.S.C. § 832 (1982), that forbids power deliveries to polluters), clearcutting, DDT, and the Alaska pipeline. User, as distinguished from preserver, gains under outdated laws include the General Mining Law of 1872, 30 U.S.C. §§ 22-39 (1982), and Massachusetts beach access (*see* Opinion of the Justices, 365 Mass. 681, 313 N.E.2d 561 (1974) (discussing Mass. HB 481 (1974)). These unforeseen applications of statutory "sleepers" typically inspire "corrective" legislative responses.

42. *See* G. CALABRESI, A COMMON LAW FOR THE AGE OF STATUTES (1982); *see generally* G. GILMORE, THE AGES OF AMERICAN LAW (1977).

43. The penalty, perhaps, is measured by a decline in our unidentified standard of statutory influence; call it a cost of political illegitimacy.

44. Reference is to the Second Law of Thermodynamics. *See* J. RIFKIN WITH T. HOWARD, ENTROPY: A NEW WORLD VIEW 33-37, 56-58 (1980).

cies of decline and the vehicles of rehabilitation appears indeterminate.

A second way to think about statutes declining over time is to focus upon the psychology of the players. Statutory paradigms in the minds of lawyers may share a fate similar to scientific paradigms in the minds of scientists.[45] Old visions are squeezed out by the new, not because of mass conversion, but because the old believers otherwise die and pass from the scene.[46] Of course, this metaphor is imperfect: new scientific theories catch on and spread presumably because they represent an improvement in explanatory power and utility for the investigator. Are new laws an improvement on the old in this practice-enhancing sense?[47] One can think of a half-dozen reasons why "new law" arguments are preferable to the "old,"[48] but strong trends do not necessarily exclude opportunities for the maverick. Game theory brings us back to the lesson of the red squirrel and of the owl and the crows: every strategy is a winner if the others are pursuing strategies that make it a winner.[49]

A third way to assess the fate of statutes over time can draw upon the insights of evolutionary biology about the dangers of specialization. Exquisite refinement within clumsy historical constraint is an evolutionary path oft-taken,[50] and it is a road to extinction: "[s]uch is the way of nature that solutions so perfect they left no room for further improvement often [come] to a premature end."[51] This course of specialization is followed by many of the environmental statutes because of the dynamics of the gameplaying that produces the legislation and changes to it.[52] One can expect these jerrybuilt specialist laws to be trapped in a destiny of decline, flanked and overwhelmed by cir-

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45. *See* T. KUHN, THE STRUCTURE OF SCIENTIFIC REVOLUTIONS (1962).

46. An informal tally of subscribers to the old Refuse Act of 1899, 33 U.S.C. § 407 (1982), as a tool of water pollution control discloses a diminishing pool of supporters, made up mostly of aged sentimentalists and a small group of the legally illiterate, that is, nonlawyer investigators who naively believe that the law means what it says.

47. Old laws, after all, have stood the test of time.

48. For example, they have a greater claim to legitimacy, a closer fit to contemporary problems and are more efficient.

49. The discussion in the text is suggestive of a famous article by John Maynard Smith, *The Theory of Games and the Evolution of Animal Conflicts*, 47 J. THEORETICAL BIOLOGY 209 (1974). One suspects that the choice of research models is better explained by game theoretic thinking than by maximization analysis, where researchers gradually converge on the "best" approach. In law, it seems, growth of popularity of one school simply opens the door to the successful invasion by "maverick" hypotheses.

50. This lesson is taught elegantly in the several books of Stephen Jay Gould. *See, e.g.*, S. GOULD, THE FLAMINGO'S SMILE: REFLECTIONS IN NATURAL HISTORY (1985).

51. *See* L. MARGULIS & D. SAGAN, MICROCOSMOS: FOUR BILLION YEARS OF EVOLUTION FROM OUR MICROBIAL ANCESTORS 147 (1986).

52. *See* 1 AIR AND WATER, *supra* note 1, at v-ix.

cumstances changing about them. The decline of individual enactments, of course, does not speak to the success or failure of the overall enterprise. The legal war against pollution proceeds on many fronts, and can claim gains elsewhere that outweigh individual setbacks.

V. Conclusion

Deception is an integral component of communication and a prominent feature of the decisionmaking processes that yield the formal products of legislation. The effect of this deception on future legislative behavior and its treatment in the courts are deserving subjects of inquiry. The principal judicial response to this phenomenon has been denial, but there are reasons to believe that consistent perpetuation of this fiction assures neither admirable legislation nor a quick fix of past errors.